Atmosphere Investigation

Aerosols Data Sheet

School Name _____ Study Site: ATM-_____

Date : _____

Observer names:_____

_____

For Satellite overflights on date of measurements:

Satellite/instrument name: _____ Time of overflight (UT): _____ Max elevation angle (deg): ____

Sun Photometer Instrument serial number: _____

Case temperature before taking measurements (multiply voltage reading times 100) _____ ° C

Fill in the second-fifth columns of this table and report your data to GLOBE. GLOBE will provide you with calculated values for AOT, which you then record in the sixth column. If your sun photometer has a rotary switch with a "T" (case temperature) position, fill in 100 times the displayed value before and after your measurements.

Measurement Number[1]	Local Time[2] (hrs:min:sec)	Universal Time[3] (hrs:min:sec)	Maximum Voltage in Sunlight[4] (volts)	Dark Voltage[5] (volts)	AOT[6] (cm)
1 (green)					
1 (red)					
2 (green)					
2 (red)					
3 (green)					
3 (red)					
4 (green)					
4 (red)					
5 (green)					
5 (red)					

[1] At least three sets of measurements are required.

[2] Ideally, time should be reported to the nearest 15 seconds, using an accurately set timepiece.

[3] Be careful when converting local time to UT.

[4] Always report voltages with 3 digits to the right of the decimal point. For example, 1.773 rather than 1.77.

[5] Enter dark voltage in units of volts, not millivolts. For example, 0.003 V rather than 3 mV.

[6] These values are calculated from your data and provided by GLOBE.

Case temperature, after taking case measurements: (multiply voltage reading x 100):_____ ˚C

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Cloud and contrail conditions (If sky not obscured, check the box for each cloud or contrail type you observe and check one box for cloud or contrail cover amount.)

Cloud Type *(Check all types seen)*

Cirrus	❒
Cirrostratus	❒
Cirrocumulus	❒
Altostratus	❒
Altocumulus	❒
Stratus	❒
Stratocumulus	❒
Cumulus	❒
Nimbostratus	❒
Cumulonimbus	❒

Contrail Type *(Record the number of each type observed)*

Short-lived ———
Persistent Non-Spreading ———
Persistent Spreading ———

Cloud Cover *(Check one- if sky not obscured)*

No clouds (0%)	❒
Clear (0% - 10%)	❒
Isolated (10 - 25%)	❒
Scattered (25% - 50%)	❒
Broken (50% - 90%)	❒
Overcast (90% - 100%)	❒
Sky Obscured	❒

Contrail Cover *(Check one- if sky not obscured)*

None	❒
0-10%	❒
10-25%	❒
25-50%	❒
>50%	❒

Sky Conditions

(Check one box in each table, as appropriate.
Sky conditions can be checked only if sky not obscured.)

Sky Color		***Sky Clarity***		***Sky Obscured by***	
Deep blue	❒	Unusually clear	❒	Fog	❒
Blue	❒	Clear	❒	Smoke	❒
Light blue	❒	Somewhat hazy	❒	Haze	❒
Pale blue	❒	Very hazy	❒	Volcanic ash	❒
Milky	❒	Extremely hazy	❒	Dust	❒
				Sand	❒
				Marine Spray	❒
				Strong rain	❒
				Strong snow	❒
				Blowing snow	❒

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Current Air Temperature (obtained following GLOBE Protocol):_____ °C

Relative Humidity (obtained following GLOBE Protocol)

Dry bulb temperature* (°C):_____ Wet bulb temperature* (°C):_____

*Sling Psychrometer only. (Note: Current air temperature and dry bulb temperature should be similar.)

Relative Humidity (%): _____

Barometric Pressure: _____ mbar ❒ Sea Level Pressure ❒ Station Pressure

Select data source (check one):

❒ Online or broadcast source

❒ Aneroid barometer

❒ Other barometer

Comments: Describe conditions that could affect your measurements, such as urban smog, smoke from forest fires, blowing sand, or dust from agricultural activities. Also, include air temperature and relative humidity values that were obtained without following GLOBE protocols.